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85-3636 STAT

ROUTING AND RECORD SHEET

SUBJECT: (Optional)

Overview of Corporate Data Program

FROM: Director of Information Technology
2D00, Hqs.

EXTENSION

NO.

DATE

21 October 1985

TO: (Officer designation, room number, and building)

DATE

RECEIVED

FORWARDED

OFFICER'S
INITIALS

COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)

1. DDA Office Chiefs

2.

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15.

This paper presents an overview of the Corporate Data Program advocated by OIT. We seek a highly integrated overall system where, for example, when basic data about Joe A. Jones is entered into the system by OP (or OS), this basic data is simultaneously entered into other systems which need the same data in OF, OT&E, and OS.

When advocating a centrally managed effort in this regard, OIT is not asking to take over all of the involved subsystems. OIT is not seeking more turf. We are pushing to make the new systems in DA offices work together easily as one big system to the extent this is desirable.

We invite comments. Please send them to the Deputy Director, OIT --

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26 September 1985

MANAGEMENT OVERVIEW

CORPORATE DATA PROGRAM

BACKGROUND

Agency administrative/management systems are seriously deficient in their ability to meet the decision support requirements of the late Eighties and Nineties. The Agency faces huge resource expenditures and unacceptable time delays in its efforts to modernize, enhance and integrate these systems if the existing systems development methodologies and design philosophies are used. New approaches are needed if the Directorate of Administration is to meet the challenges that confront the Agency in the area of information resources management.

The Agency administrative systems environment is inadequate in the following respects:

- Data are too often incorrect, not current or inconsistent
- Agency administrative/management systems are
unintegrated, generally obsolete and inflexible
- These systems are inaccessible and unfriendly
to users
- The applications backlog (known) is large and
growing (over 800 work-years)
- The hidden (unknown) backlog is estimated as
equal to the known backlog
- Development, enhancement and maintenance schedules
for these systems are unacceptable
- Development and support resource requirements are
large and growing
- The data base administration and operations workload
is burdensome

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RECOMMENDATION

A centrally managed effort must be established to modernize, enhance and integrate Agency administrative/management applications systems, and to build a data base of shared Agency resource data. The focus of this program must be to develop and implement an integrated and coherent "Corporate" data environment where cost-effective and timely applications development can occur.

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PROGRAM DESCRIPTION

The Corporate Data Program (CDP) is a major systems development effort of the Office of Information Technology to modernize, enhance and integrate Agency administrative/management applications systems and build a common data base of all shared Agency resource data.

Currently, the Corporate Data Program comprises 12 applications development activities and data traditionally managed by the Office of Comptroller and six Directorate of Administration offices (see Attachment for a discussion of the systems currently included in the development program.) The key element of the CDP is central management of shared Agency data ("Corporate Data".) All data required by more than one component are candidates for the Corporate Data Base. All applications ("Corporate Systems") that utilize shared data should potentially be included under the umbrella of the Corporate Data Program.

The Office of Information Technology is the agent of the Office of Comptroller and Directorate of Administration for the Corporate Data Program. As agent, OIT has the responsibility for specifying and establishing the Corporate Data Environment, including software and hardware; defining the Corporate Data Base; developing a Corporate Systems Architecture; and implementing and operating Corporate Systems.

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GOALS

The goals of the Corporate Data Program are to:

- Enhance the integrity,timeliness,consistency and security of Agency administrative/management data
- Enhance the accessibility and usability of this data
- Improve system responsiveness and user friendliness
- Improve the level of integration and coherence of Agency administrative/management systems (seamless web concept)
- Improve the central management and control of Agency administrative/management data
- Reduce the applications development backlog
- Improve applications development and maintenance schedules
- Reduce the cost of applications development and maintenance
- Use commercially available "mainstream" technology to develop and operate Agency applications
- Improve the reliability and availability of Agency administrative/management systems
- Reduce the data base administration/operations workload

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APPROACH

- MAINTAIN CENTRAL CONTROL OF ALL ADMINISTRATIVE DATA AND SYSTEMS
- USE MODERN, COMMERCIALLY-AVAILABLE SYSTEMS TECHNOLOGY
- BUILD SUBJECT-ORIENTED DATA BASES
- MAKE MAXIMUM USE OF COMMERCIALLY-AVAILABLE APPLICATIONS SOFTWARE
- STRIVE FOR A HIGH LEVEL OF OVERALL SYSTEM INTEGRATION

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ESTABLISHING A CORPORATE DATA ENVIRONMENT

MAINTAIN CENTRAL CONTROL OF ALL ADMINISTRATIVE DATA AND SYSTEMS

- Agency administrative/management systems share data
 - Data that are shared and are essential for Agency operations are "Corporate" data
- Shared data must be controlled and managed
 - Data standardization required
 - Data redundancy should be minimized
- Coordination of ongoing programs absolute necessity
- Data are Agency (not component) resources
 - Components may be required to sacrifice for the "Corporate" good
 - Traditional data ownership patterns must be modified
- Agency Corporate data managed/controlled by the Comptroller and the Deputy Director for Administration
- As agent of the Comptroller and DDA, OIT is the Agency manager of Corporate Systems and the Corporate Data Base. OIT is responsible for:
 - Specifying and establishing the Corporate Data Environment
 - Defining the Corporate Data Base
 - Specifying the Corporate Systems Architecture
 - Developing and operating Corporate Systems
- Corporate Data Program (CDP) established January 1984 in Management Information Systems Group, OIT

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Page Denied

Next 1 Page(s) In Document Denied

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ESTABLISHING A CORPORATE DATA ENVIRONMENT

BUILD SUBJECT ORIENTED DATA BASES

---Current environment is applications not data oriented

---New data base for each application

---Complex and costly development

---Interfaces proliferate

---Interfaces cause unreliable, inconsistent
and noncurrent data to be present

---Interfaces raise the cost and complexity
of maintenance and enhancements

---Interfaces and the required interface
software dramatically increase the cost
and time required for data base administration
and operations

---THEREFORE, INTERFACES MUST BE ELIMINATED,
WHEREVER POSSIBLE

---Subject data bases are logical clusters of
related (subject, e.g, financial, personnel, etc.) data

---All applications use subject data bases

---Collection of all subject data bases is the
"Corporate Data Base"

---Development of new applications and maintenance
is ultimately simplified (once the Corporate Data Base
exists)

---Data need be entered once (minimal redundancy,
inconsistency and currentness problems)

---Access is controlled by Integrated Data Dictionary,
improving data accuracy and security

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ESTABLISHING A CORPORATE DATA ENVIRONMENT

MAKE MAXIMUM USE OF COMMERCIALY AVAILABLE APPLICATIONS SOFTWARE

---Can be very cost-effective

---Simplifies and expedites development and maintenance

---Provides enhanced reliability and availability as
compared to in-house developed software

---Vendor performs costly integration

---Some drawbacks:

---Development generally required

---Customer may have to modify way of doing business

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ESTABLISHING A CORPORATE DATA ENVIRONMENT

STRIVE FOR A HIGH LEVEL OF OVERALL SYSTEM INTEGRATION

- Horizontal integration among applications is essential
 - Standardization must be ensured
 - Interfaces are minimized
 - Development to make up for disconnects, overlaps and shortfalls is minimized
 - Maintenance is simplified
 - Unintegrated applications may be inferior to and less cost-effective than in-house development
 - Horizontal integration can be best achieved by a single vendor approach (the nightmares of multi-vendor environments are well known)
- Vertical integration (between applications and the DBMS) must be maximized
 - Full power of DBMS can be utilized
 - Integration of new applications simplified
 - User sees single integrated environment
 - Performance generally is enhanced
 - Maintenance is simplified

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